



Blackrock Medical Clinic

Exercise for Health

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Why exercise?

For Health

Regular exercise reduces the risk of major illnesses such as, heart disease (33% ↓), stroke (31% ↓), cancer (breast 40% ↓, endometrial 27% ↓, colon 30% ↓), osteoporosis (60% ↓) and diabetes (58% ↓). It improves mental health and quality of health. Although exercise alone does not significantly affect weight it does change body type, waist size and help maintain a healthy weight. It increases your healthspan (the number of years you will live with a good quality of health).

Regular exercise can reduce all cause mortality (risk of death) by up to 30%

Everyone can do it, it is free, and even a modest increase will improve outcomes. If it came in a pill, we would prescribe it to everyone!

For Family

Regular physical activity by a parent or guardian provides a good role model for children and increases the chance that they will form beneficial habits. Introducing exercise into the home is thus having a positive effect on the health of others in the home. Of course, we all want to be fit enough to play with our children or grandchildren. It is important to recognise that fitness naturally declines with age so if you want to be a fun, healthy grandparent then you need to have a high level of fitness in your middle age.

For Performance

Pick a type of 'performance' and exercise will improve it. Brain functioning is improved, so workplace performance will be enhanced. Team or sports performance will improve. Sexual performance is improved in men and women with physical symptoms such as erectile dysfunction improving or resolving and libido (sexual desire) increasing in both men and women but particularly women with even moderate bursts of exercise.

What type of exercise?

The main types of exercise are 'strength exercises' (resistance), aerobic exercise, stretching/flexibility exercises, and balance exercises. Each type provides a different benefit and a combination of all provides the maximum benefit. A combination of aerobic and strength exercises confers the greatest benefit in terms of cardiovascular and metabolic health. Stretching/flexibility and balance exercises help with mobility and reduce the risk of falls.

Strength Exercises (Resistance)

Strength, or resistance exercises focus on muscle strength and involve lifting, pushing, or pulling things that are heavy or using resistance against things such as elastic bands. The weights can be external or simply body weight e.g. climbing stairs, squats etc.

For an activity to be muscle strengthening it needs to work the muscle to the point where you need a short rest before carrying on. For example, if doing a 'bicep curl' (holding a weight in your hand, arms by your side, palm front, slowly bend at the elbow keeping the elbow close to the body, all the way up and back to starting position), you should be able to do 10 repetitions (reps) of this movement. If you can easily do 12 reps, then you need to consider increasing the weight. Your 10 reps make up 1 set. You should be aiming to complete 3 sets with a short rest between each.

Aerobic Exercises (Cardiovascular)

Aerobic or cardiovascular exercises are prolonged and rhythmic which require increased oxygen consumption in the muscles. These are the exercises that get your heart rate up and get you puffed. Examples are running, cycling, swimming, and walking.

Stretching/Flexibility Exercises

Stretching and flexibility exercises are those that improve the ability of a joint to maintain the movement necessary for physical activity. These include simple stretches, yoga, Pilates, Tai Chi.

Balance exercises

Balance exercises are focused on improving your balance and stability. They reduce the risk of falls, particularly in later life. These include, heel-toe walking, standing on one leg, step-ups etc.

Sit Less

The link between illness and sitting first emerged in the 1950s, when researchers found double decker bus drivers were twice as likely to have heart attacks as their bus conductor colleagues. The drivers sat for 90 per cent of their shifts, the conductors climbed about 600 stairs each working day. Many of us sit for as much as 9 hours each day. Some watches will remind you to stand, or you can just be mindful of the need to get up and walk and build breaks into your day.

How much Exercise?

Amount

The amount of time and the intensity of exercise are important. For most people (aged 19-64) the recommendation is to do:

1. Strength exercises: at least twice a week.
2. Aerobic exercise: 150 minutes of moderate intensity exercise or 75 minutes vigorous intensity exercise a week. (You can also do High Intensity Interval Training (HIIT))
3. Stretching and balancing exercises: at least twice a week.
4. Sit less.

Intensity

1. Low: Minimal effort e.g. walking, eating, preparing food, ironing

Moderate: Some effort, heart rate will increase, and you will breathe faster. You can still talk but you wouldn't sing.

2. Vigorous: You will breathe hard and fast; you will only be able to say a few words.
3. High/Very Vigorous: Maximal effort. You will reach maximum heart rate, breath/gasp and be unable to speak.

Behavioural Modification

Taming the Toddler

Your brain, in simple terms, consists of a toddler and a sage. The toddler doesn't think very hard, it just acts. It understands instant reward and gratification. The toddler requires very little brain power. The sage takes a long time, thinks hard, and can predict the future. This takes a lot of brain power. The brain likes to be efficient which is why you form habits which are shortcuts from a trigger to an action.

If you let the toddler rule (default), then you will act for short term gain at the expense of long-term benefit. For example, the toddler will watch TV and eat a biscuit as both things give instant reward. If every time you come home from work, tired and stressed (the trigger) you do this, a habit will form. You will

stop having to think, you will just act, in the same way, to this trigger each time.

You need to use your sage to tame your toddler. Think carefully about what you want to do, e.g. exercise. Think about a trigger to doing it (like a time or occasion you can always do it). Think about things that will make it habitual such as always wearing your gym clothes to exercise, doing it in the same place and time. Think about a healthy reward, do an exercise you like, or do it with a friend, listen to a podcast or good music. Think like you are training a toddler! A habit takes at least a month to form but when it does you stop having to think about it and you will just do it automatically. You now have a new, healthy habit.

Self-Monitoring

Self-monitoring can be a great way to keep yourself motivated. Some people are particularly interested in “their stats” and this can be useful, however you need to be careful that it doesn’t affect your motivation negatively. Don’t monitor too closely otherwise you will be picking up the background noise (the natural ebbs and flows). Be more interested in the trend over time.

Step counters (available stand alone or as an application for a phone) can help give good indications of exercise levels. There is a widespread belief that we should aim for 10,000 steps per day although there is little scientific basis for this. What is more important is that we can aim to have modest and sustainable increases over time.

Some people choose to monitor other health indicators such as blood pressure, pulse, VO2 max and even ECGs. This may provide a degree of positive feedback but in general we will advise if we feel it would be helpful in your specific case.

Whatever you choose to monitor the key to using it effectively is to set reasonable, sustainable goals and to give adequate time between readings to filter out the ‘noise.’

Understanding Your Mood

Be mindful of your mood. Your motivation is acutely linked to your mood. One of the best ways of improving mood is to get some aerobic exercise however, when you have a low mood your motivation to exercise is at its lowest. It is important to recognise how you are feeling, that it is only a

feeling, and that you still have control over what you do. You can even make mood be a trigger for exercise e.g. 'I'm feeling low so I will go for a run'! Doing this hacks your habit-forming potential to counteract flagging motivation.

Goal Setting

The key to effective goal setting is to make sure goals are small, achievable, and realistic. Setting goals and achieving them taps into your brains reward system and increases the chance of sustaining a good exercise habit.

Be specific. Avoid setting vague goal such as "I will get fitter" or "I will be healthier." Instead set specific goals such as "I will increase my step count from 6000 to 7000 average in the next week" or "I will be able to swim 10 lengths of the pool in 1 month".

Make gradual goals that can be maintained e.g., instead of saying you will get the recommended amount of exercise plan for next week to be an improvement of last week. Put them in a calendar and tick off each achievement, there is satisfaction in this that triggers the brains reward system.

Long term sustained motivation is more likely when people take ownership of their behavioural changes and goals, and engage in them because they are deeply meaningful or enjoyable.

Make your goals achievable. If you set goals too high, then the failure to achieve them will demoralise you.

Reward yourself. Noting your goals and ticking them off can be a reward in itself, but you may wish to set points where you reward yourself with tangible things such as a day out, a magazine or just a relaxing bath. Be careful not to associate foods or unhealthy habits with rewards. It is easy to get into the habit of "treating yourself" with food but you are then activating the reward system in your brain to work against your intended health goal.

Don't overwhelm yourself with too many goals. Focus on the ones that are most important to you. Add new ones in as you achieve old ones.

Managing Failure

It is unreasonable to expect that you will maintain a perfect exercise regime for the rest of your life without any 'blips.' Managing 'failure' is important. We are only human and thus we must expect to have setbacks from time to time. Planning for these, recognising them, and taking positive action is what will get us back on track quickly. Here are some strategies:

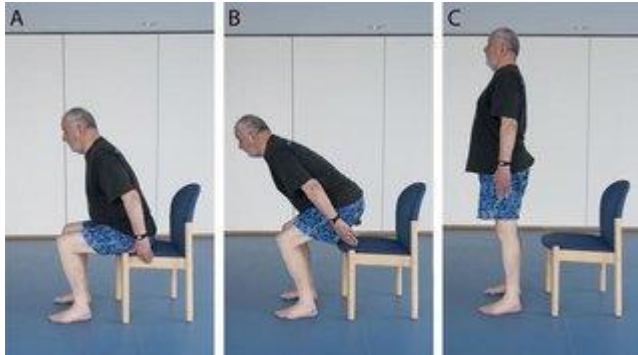
1. Set a trigger for reactivating supports and stick to it. E.g. If you find that you have gone a week without any workouts then you re-engage with us, rope in a friend, attend an exercise class etc.
2. Develop plans for positively dealing with going off track. Do this when you are early in your journey, positive and engaged. Your plan should support your future self with positive ideas for getting back on track.
3. Identify potential challenges in your future. Think about what might trip you up and think of strategies for dealing with it. E.g., Christmas might trip me up, I will plan to have fun family events that involve exercise rather than TV, and I will start my post-Christmas recovery earlier than New Year etc.
4. Cognitive restructuring. Develop ways to counteract negative or maladaptive thoughts such as "What's the point, I've failed again." Recognise this pattern and learn to think up more positive responses like "My fitness has slipped but actually I'm still better than I was, and I can keep the general trend up."

No plan survives contact with the enemy, adapt!

Strength Exercises (resistance)

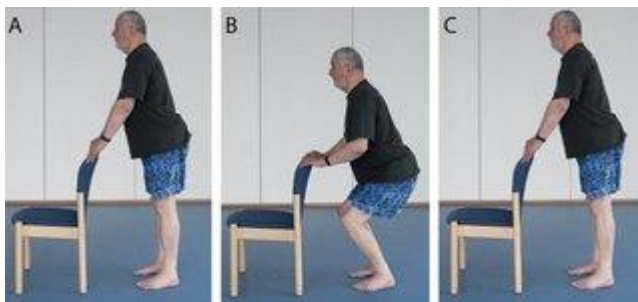
These are some examples of simple and easy strength building exercises to get you started. If you join a gym, get advice from their staff about how to use the machines and weights.

Sit-to-Stand.



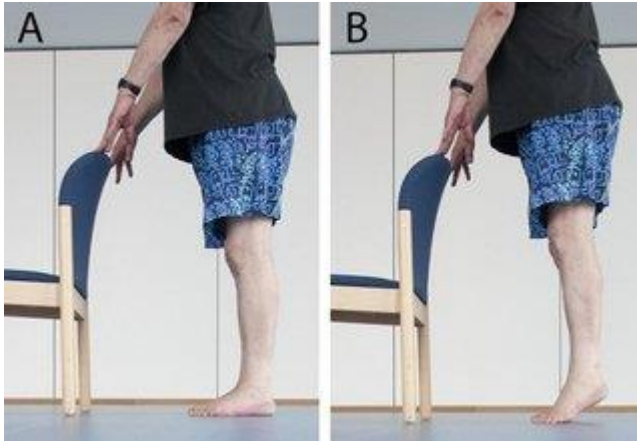
1. Sit on the edge of the chair with your feet the same width apart as your hips. Lean forward slightly.
2. Stand up slowly using your legs, not your arms. Keep looking forward and do not look down.
3. Stand upright and then slowly sit down, bottom-first.
1. Repeat 5 times – the slower, the better. Take a break and do another set. Try to get 3 sets.

Mini squats



2. Rest your hands on the back of the chair for stability and stand with your feet the same width apart as your hips.
3. Slowly bend your knees as far as is comfortable, keeping them facing forwards. Aim to get them over your big toe. Always keep your back straight.
4. Gently stand up straight, squeezing your buttocks (bottom) as you do so.
5. Repeat 5 times take a break and do another set. Try to get 3 sets.

Calf Raises



1. Rest your hands on the back of a chair for stability.
2. Lift both your heels off the floor as far as is comfortable. The movement should be slow and controlled.

Repeat 5 times take a break and do another set. Try to get 3 sets.

To make this harder, do the exercise without the chair.

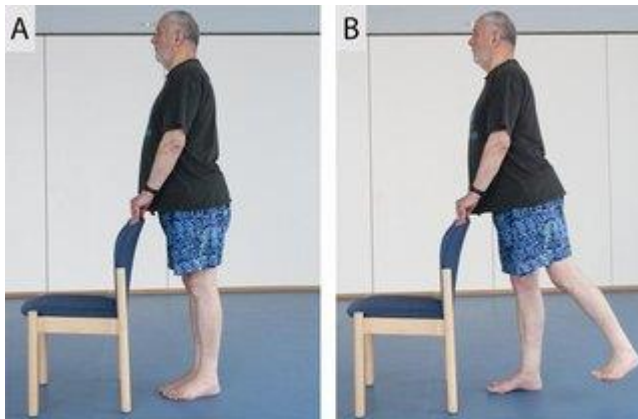
Sideways leg lift



1. Rest your hands on the back of a chair for stability.
2. Raise your left leg to the side as far as is comfortable, keeping your back and hips straight. Avoid tilting to the right.
3. Return to the starting position. Then raise your right leg to the side as far as possible.

Raise and lower each leg 5 times.

Leg extension



1. Rest your hands on the back of a chair for stability.
2. Standing upright, raise your left leg backwards, keeping it straight. Avoid arching your back as you take your leg back. You should feel the effort in the back of your thigh and bottom.
3. Repeat with the right leg.

Hold the lift for up to 5 seconds and repeat 5 times with each leg. Try to do 3 sets.

Biceps curls



You need light weights for this exercise. If you do not have weights, you can use filled water bottles instead.

1. Hold a pair of light weights and stand with your feet hip-width apart.
2. Keeping your arms by your side, slowly bend them until the weight in your hand reaches your shoulder.

3. Slowly lower the weight again.

You can do this exercise while sitting too.

Try to do 5 to 10 of these, then repeat this 3 times. Take a break between each set.

Wall press-up



1. Stand arm's length from the wall. Place your hands flat against the wall at chest level, with your fingers pointing upwards.
2. With your back straight, slowly bend your arms, keeping your elbows by your side. Try to close the gap between you and the wall as much as you can.
3. Slowly return to the starting position.

Try to do 3 sets of 5 to 10 repetitions.

Aerobic exercises

Aerobic exercise, as described above, are generally well known such as brisk walking, running, cycling etc. The key components are the intensity and duration of workouts. Here we will describe HIIT as it is likely to be less known and has specific benefits.

HIIT or High Intensity Interval Training is a specific type of aerobic workout which intersperses short bursts of vigorous exercise followed by resting periods of reduced movement. It is thought to trick the body into remaining in

'exercise mode' for longer giving an 'afterburn' effect. For the same duration of exercise, the benefits are increased.

An example of a simple HIIT workout would be when walking,

- Stretch
- 3-5 minutes warmup walking
- 1-2 minutes very brisk walking using arms (You should get short of breath and heart rate should increase)
- 2 minutes of normal walking
- Repeat cycle of brisk and normal walking 4 times
- 3-5 minutes cool down walking

For more detailed and varied workout examples try the NHS Introduction to HIIT videos here <https://www.youtube.com/watch?v=wa0Jtlh3J2s>

Stretching and flexibility

Neck rotation

Improves neck mobility and flexibility.



A. Sit upright with shoulders down. Look straight ahead.

B. Slowly turn your head towards your left shoulder as far as is comfortable. Hold for 5 seconds and return to the starting position.

C. Repeat on the right.

Do 3 rotations on each side.

Neck stretch

Good for loosening tight neck muscles.



A. Sitting upright, look straight ahead and hold your left shoulder down with your right hand.

B. Slowly tilt your head to the right while holding your shoulder down.

C. Repeat on the opposite side.

Hold each stretch for 5 seconds and repeat 3 times on each side.

Sideways bend

Helps restore flexibility to the lower back.



A. Stand upright with your feet hip-width apart and arms by your sides.

B. Slide your left arm down your side as far as is comfortable. As you lower your arm, you should feel a stretch on the opposite hip.

C. Repeat with your right arm.

Hold each stretch for 2 seconds and perform 3 on each side.

Calf stretch

Good for loosening tight calf muscles.



A. Place your hands against a wall for stability. Bend the right leg and step the left leg back at least a foot's distance, keeping it straight. Both feet should be flat on the floor.

B. The left calf muscle is stretched by keeping the left leg as straight as possible and the left heel on the floor.

C. Repeat with the opposite leg.

Perform 3 on each side.

Balance exercises

Sideways walking



1. Stand with your feet together, knees slightly bent.
2. Step sideways in a slow and controlled manner, moving one foot to the side first.
3. Move the other foot to join it.

Do 10 steps each way or step from one side of the room to the other. Avoid dropping your hips as you step.

Simple grapevine



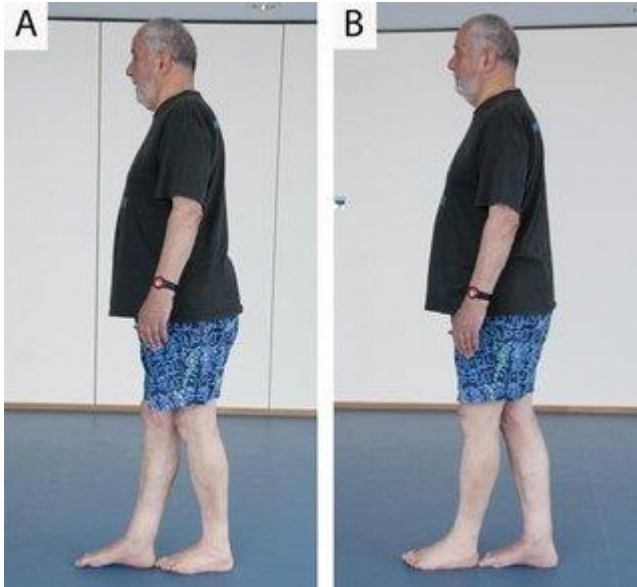
This involves walking sideways by crossing one foot over the other.

1. Start by crossing your right foot over your left.
2. Bring your left foot to join it.

Try to do 5 cross-steps on each side. Put your fingers against a wall for stability if you need to.

The smaller the step, the more you work on your balance.

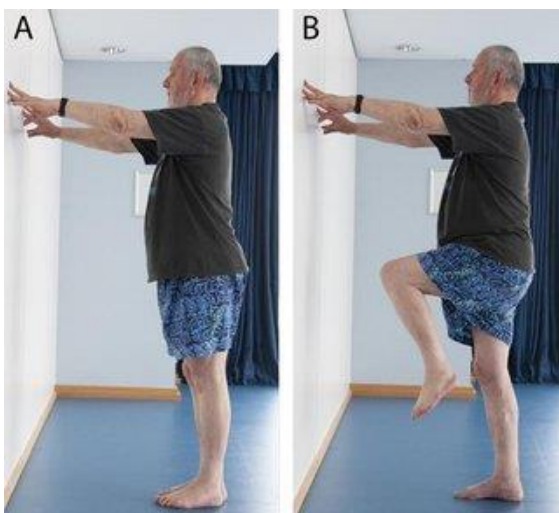
Heel-to-toe walk



1. Standing upright, place your right heel on the floor directly in front of your left toe.
2. Then do the same with your left heel. Make sure you keep looking forward.

Try to do at least 5 steps. Put your fingers against a wall for stability if you need to. As you get better at this exercise, move away from the wall.

One-leg stand.

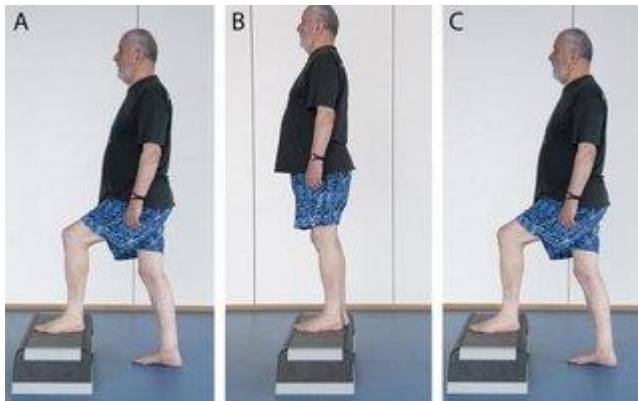


1. Stand facing the wall, with your arms outstretched and your fingertips touching the wall.

2. Lift your left leg, keep your hips level, and keep a slight bend in the opposite leg. Hold the lift for 5 to 10 seconds.
3. Gently place your foot back on the floor.

Do 3 lifts on each leg.

Step-up



Use a step, with a railing or near a wall for support.

1. Stand in front of the step and put your right foot on the step.
2. Put your weight on your right leg and lift your left foot on to the step.
3. Return to the start position, one foot at a time.

Do 5 steps with each leg.

Tips and Tricks

1. Exercise with a friend, they will give you motivation and it is harder to stop that way.
2. Keep it brisk! Increase the pace of your everyday walking. Pretend you are late!
3. Cut back on screen-time to cut back on 'sit-time.' Set yourself a goal, your phone will monitor screen time.
4. Turn sit-time into fit-time. Use an exercise machine or do sitting workouts while you watch your favourite programme.
5. Sign up for a class.
6. Plan for exercise and put it in your calendar.
7. Set achievable goals and reward yourself.

Further Information

<https://www2.hse.ie/living-well/exercise/>

<https://www.sportireland.ie/participation/local-sports-partnerships>

<https://www.getirelandactive.ie/>

<https://www.nhs.uk/conditions/nhs-fitness-studio/>